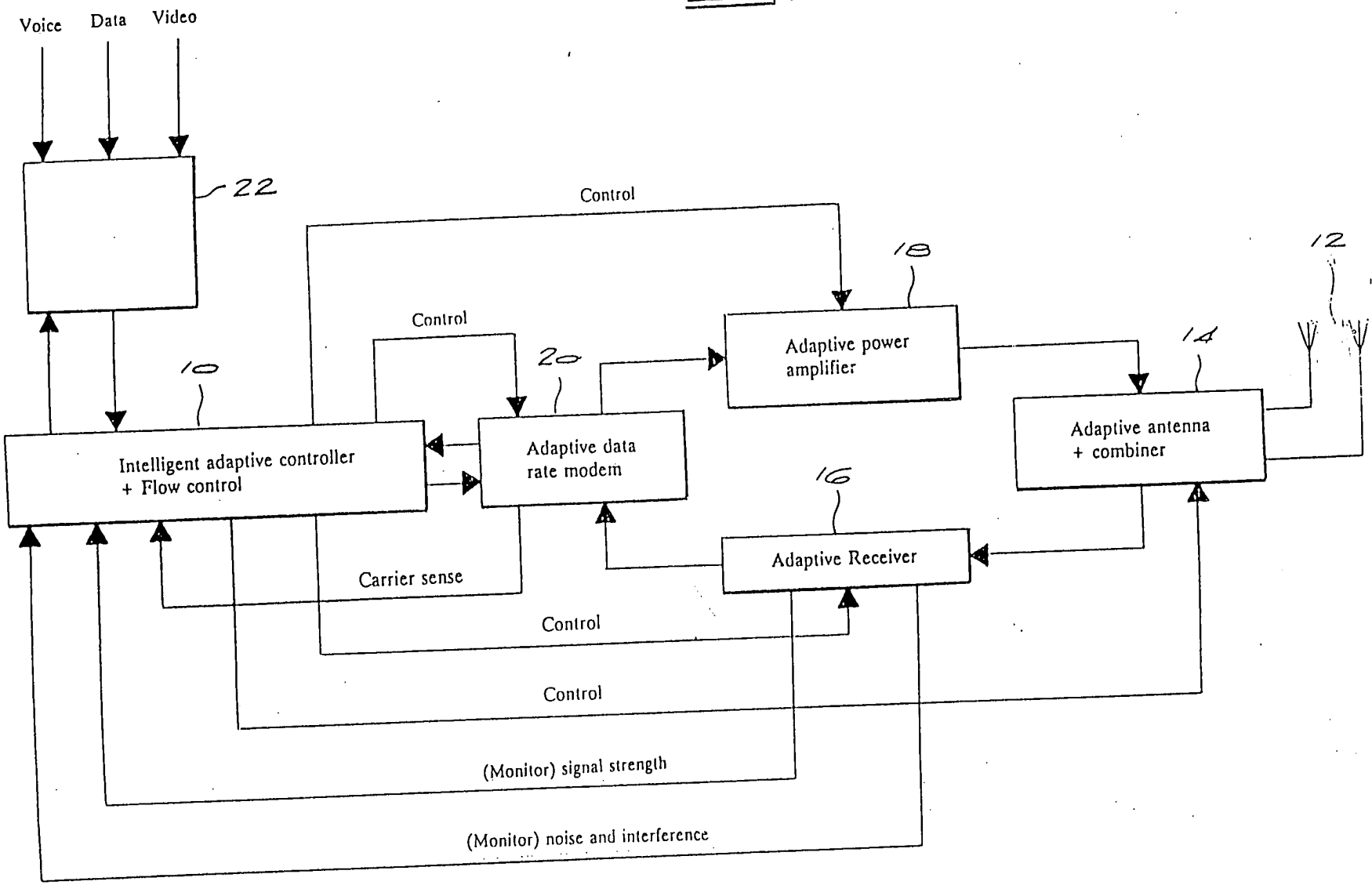
08/844,068 PCT/US90/05286 16 May 1989

FIG 1



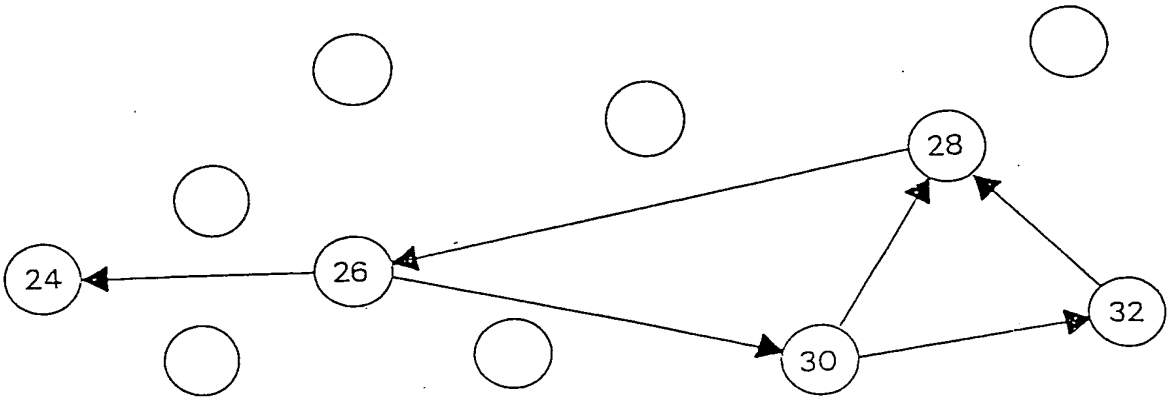


Fig 2

Synchronisation sequence - to allow modem to lock.	Message type.	Origination address of current hop.	Destination address of current hop	Final destination address of message.	Adaptation parameters-power, data rate, duration, duty cycle.	Origination address, message identifier and message data.	Error correction and detection codes

Fig 5

Synchronisation sequence - to allow modem to lock.	Message type.	Origination address of current hop.	Destination address of current hop	Final destination address of message.	Adaptation parameters-power, data rate, duration, duty cycle.	Control parameters-probe, request, acknowledgement, message acknowledge.	Error correction and detection codes.

Fig 6

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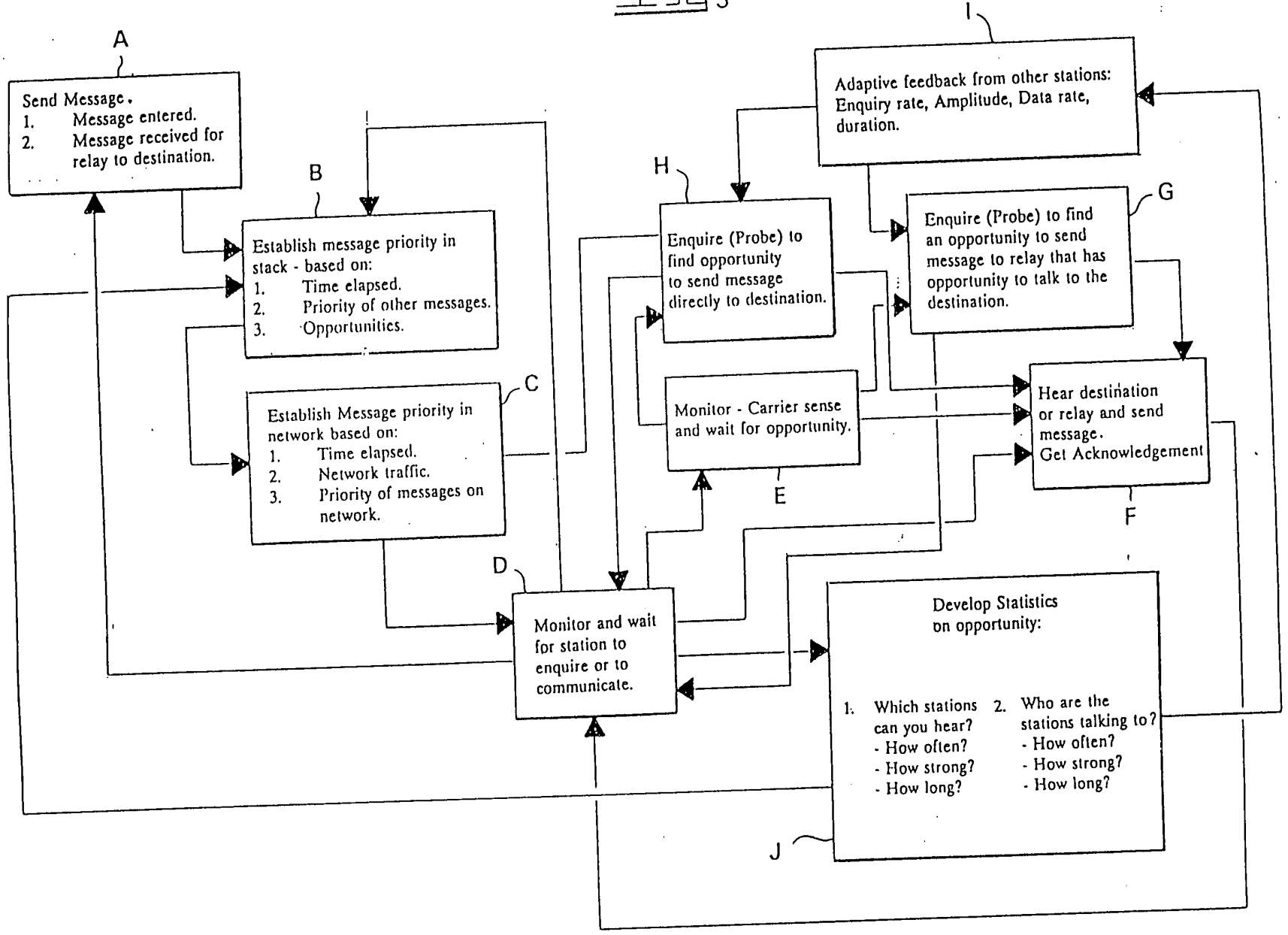
FIG 3



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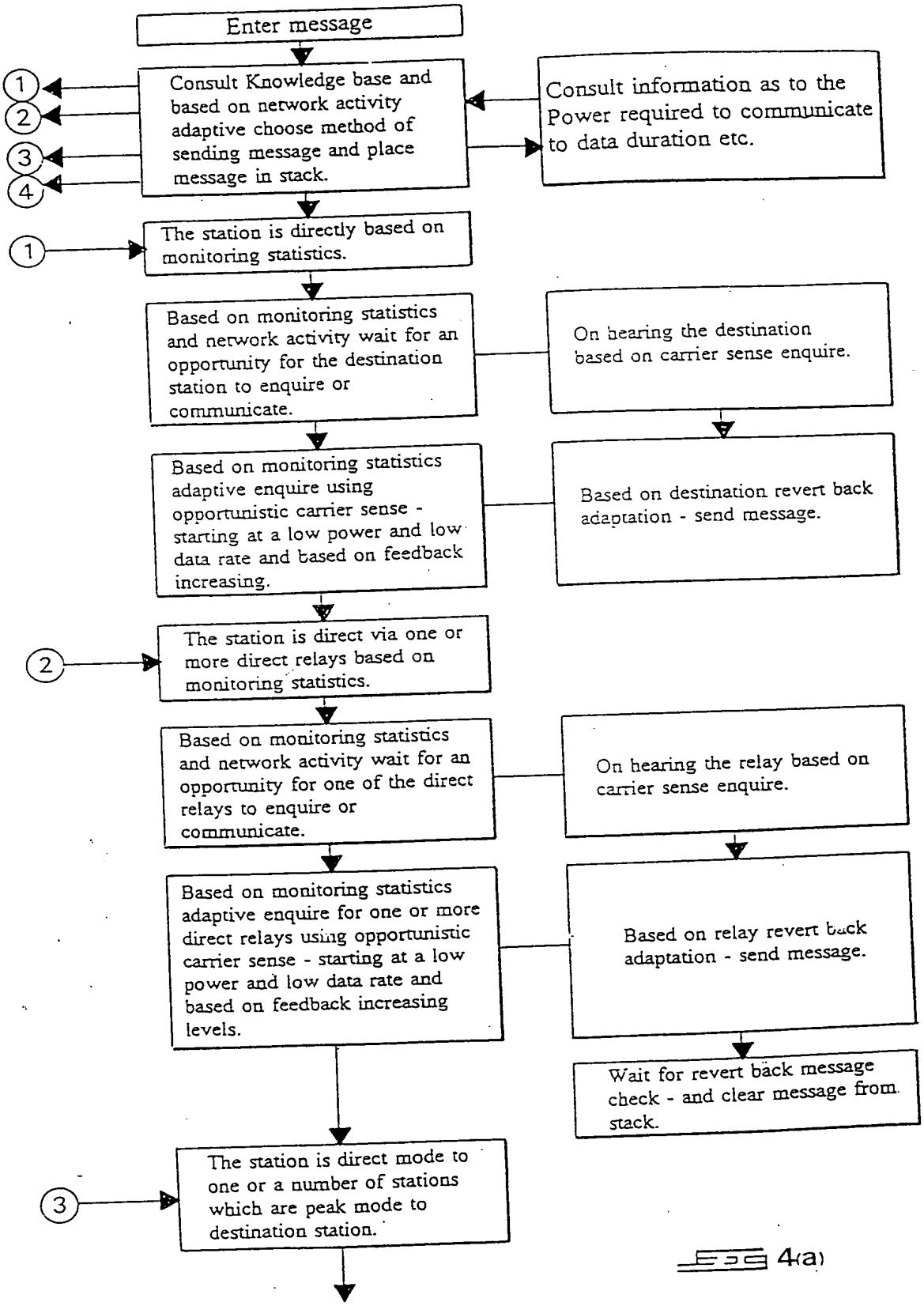

Fig 4(a)

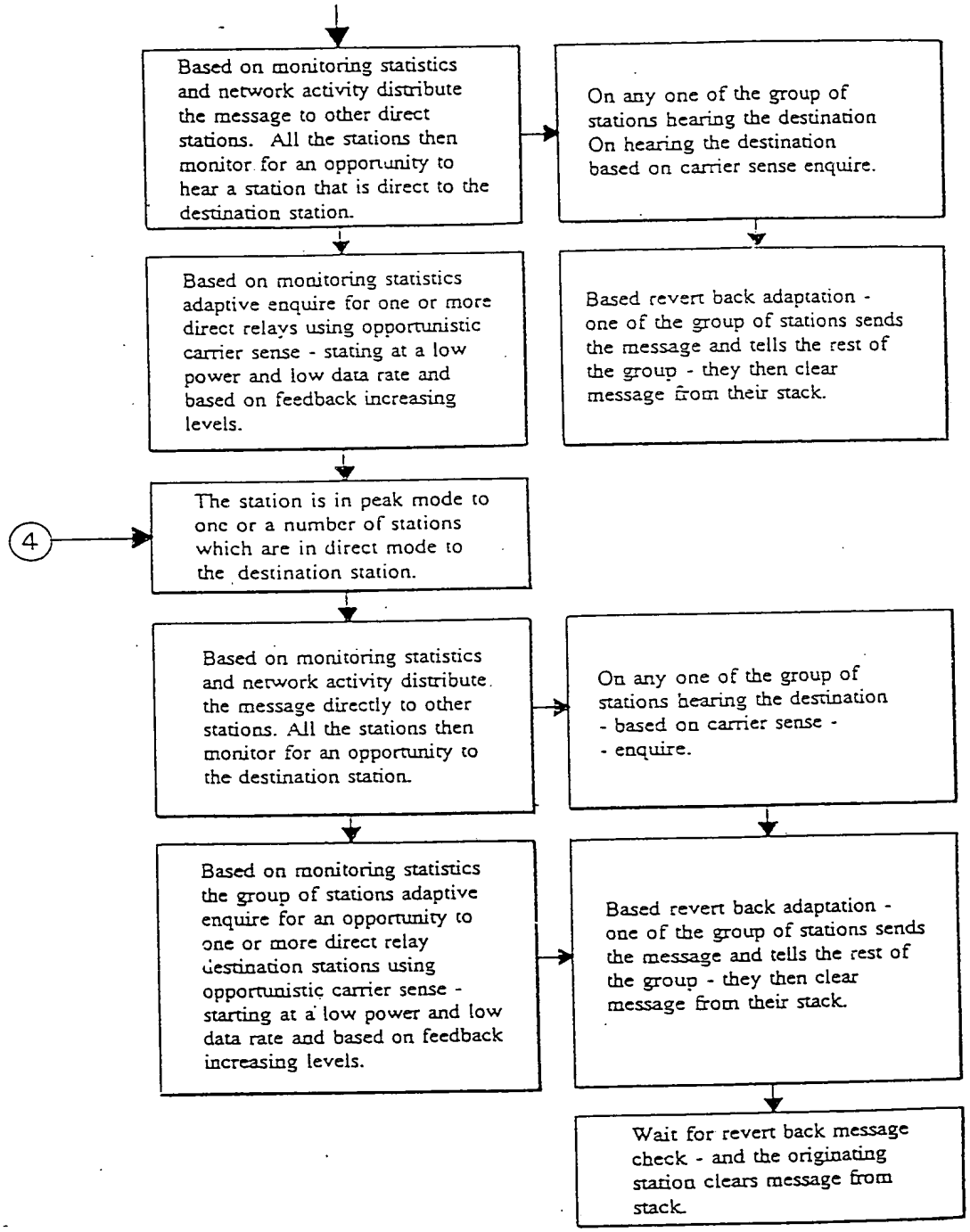
Based on monitoring statistics and network activity distribute the message to other direct stations. All the stations then monitor for an opportunity to hear a station that is direct to the destination station.
On any one of the group of stations hearing the destination On hearing the destination based on carrier sense enquire.
Based on monitoring statistics adaptive enquire for one or more direct relays using opportunistic carrier sense - stating at a low power and low data rate and based on feedback increasing levels.
Based revert back adaptation - one of the group of stations sends the message and tells the rest of the group - they then clear message from their stack.
4
The station is in peak mode to one or a number of stations which are in direct mode to the destination station.
Based on monitoring statistics and network activity distribute the message directly to other stations. All the stations then monitor for an opportunity to the destination station.
On any one of the group of stations hearing the destination - based on carrier sense - - enquire.
Based on monitoring statistics the group of stations adaptive enquire for an opportunity to one or more direct relay destination stations using opportunistic carrier sense - starting at a low power and low data rate and based on feedback increasing levels.
Based revert back adaptation - one of the group of stations sends the message and tells the rest of the group - they then clear message from their stack.
Wait for revert back message check - and the originating station clears message from stack.

Fig 4(b)

FIG 7

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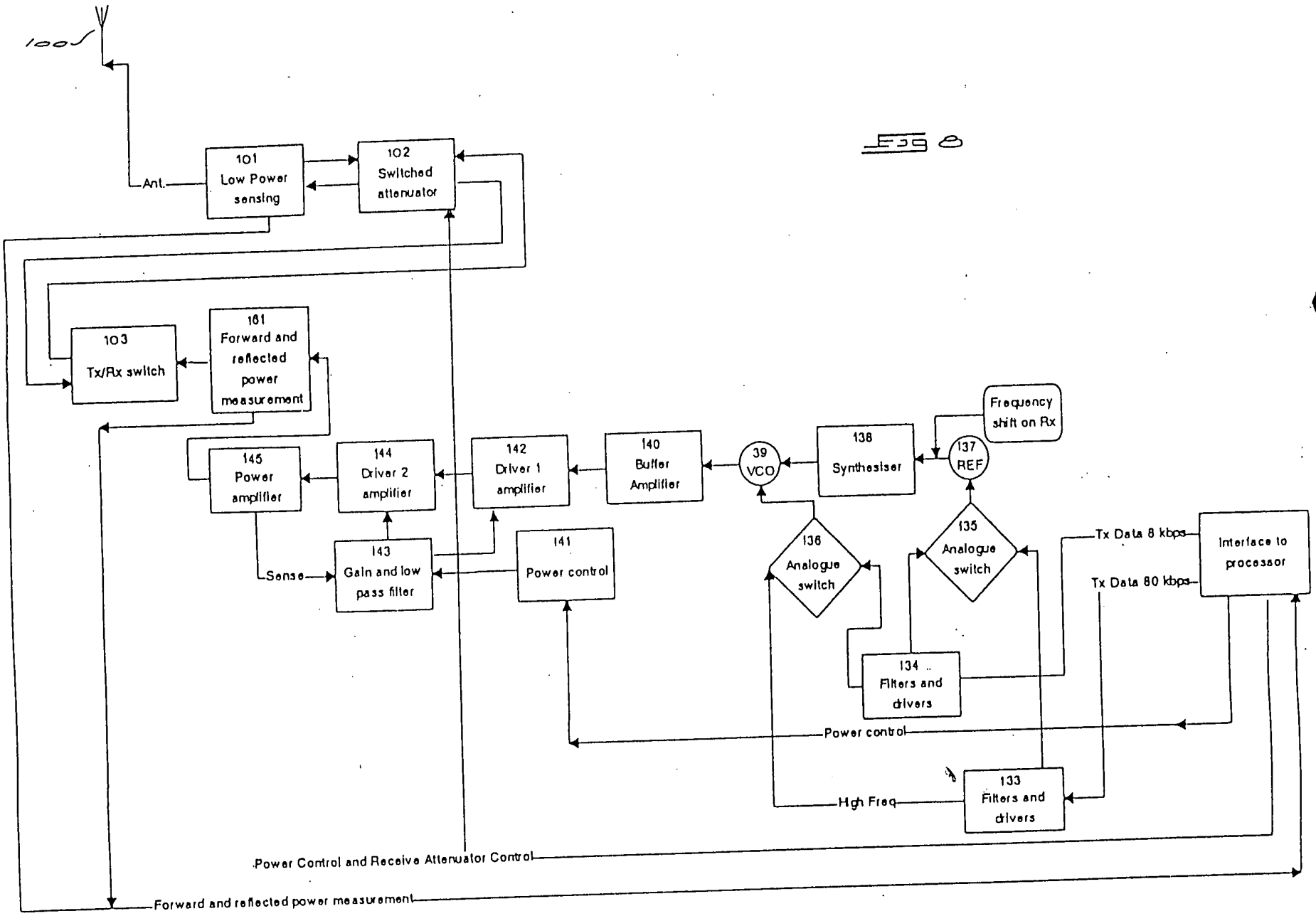
100
Ant.
101
Low Power sensing
102
Switched attenuator
103
Tx/Rx switch
161
Forward and reflected power measurement
145
Power amplifier
144
Driver 2 amplifier
142
Driver 1 amplifier
140
Buffer Amplifier
39
VCO
138
Synthesiser
137
REF
Frequency shift on Rx
143
Gain and low pass filter
Sense
141
Power control
136
Analogue switch
135
Analogue switch
Tx Data 8 kbps
Tx Data 80 kbps
Interface to processor
134
Filters and drivers
Power control
133
Filters and drivers
High Freq
Power Control and Receive Attenuator Control
Forward and reflected power measurement

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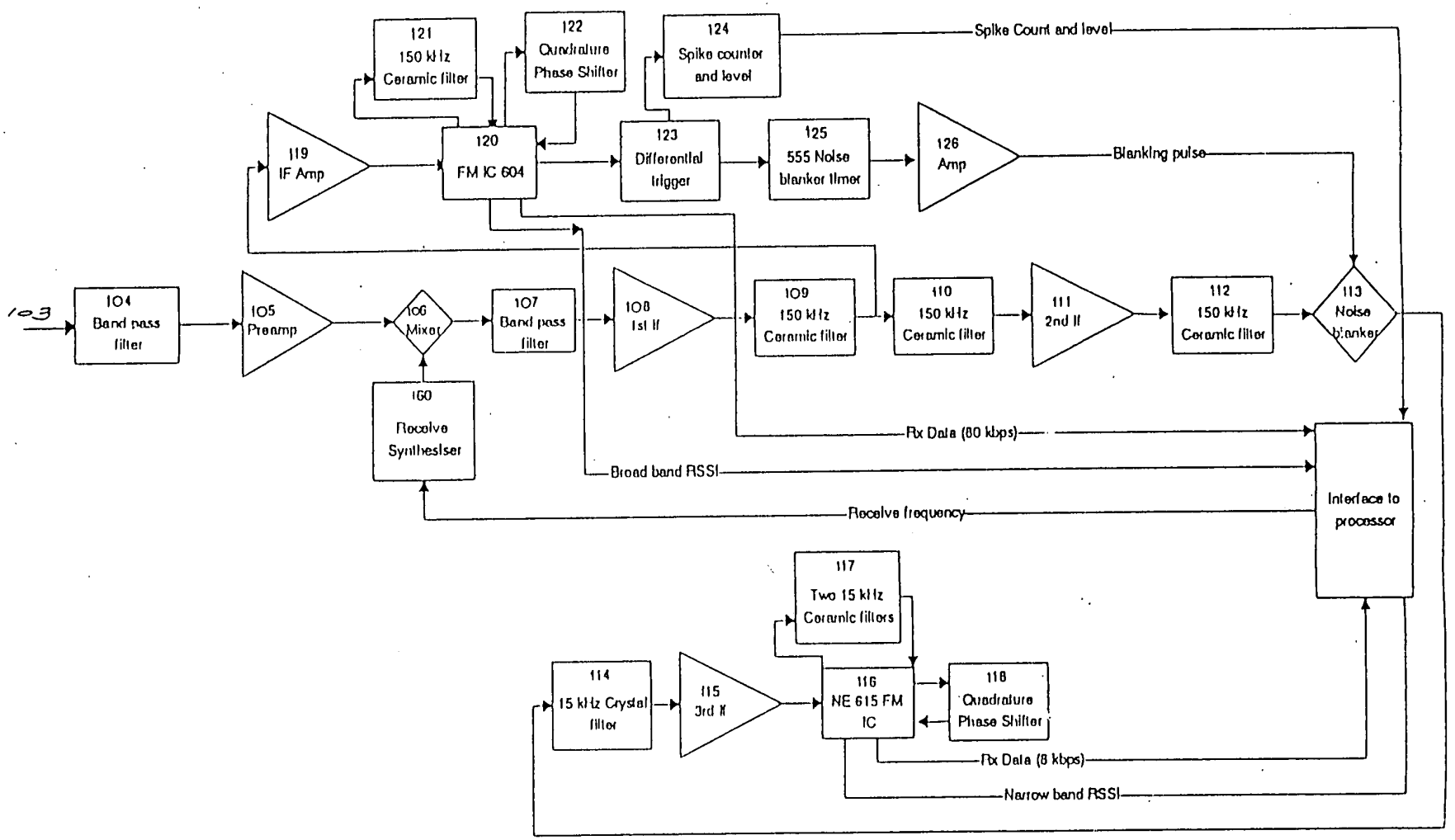

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Fig 10

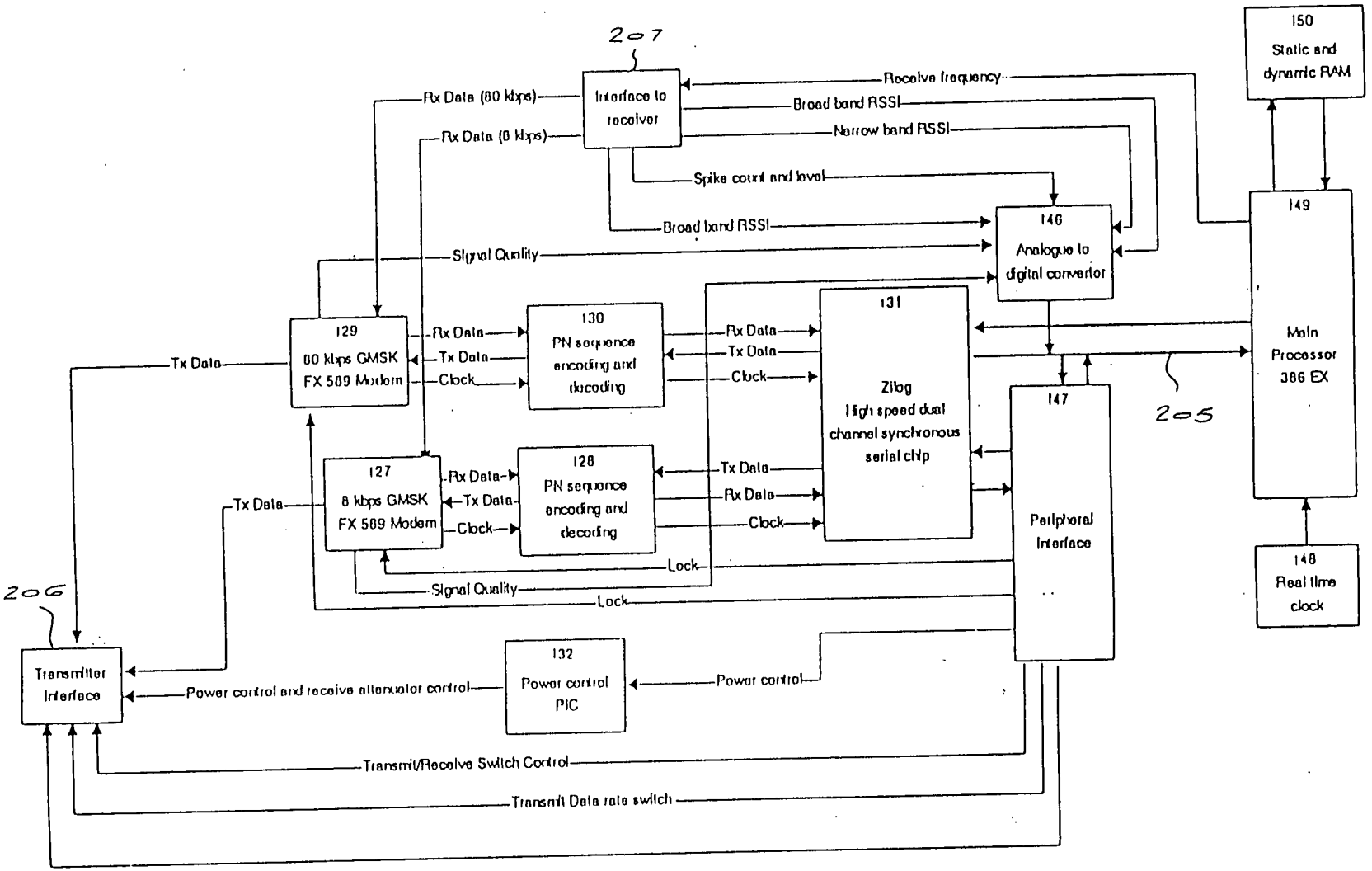

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FIG 11

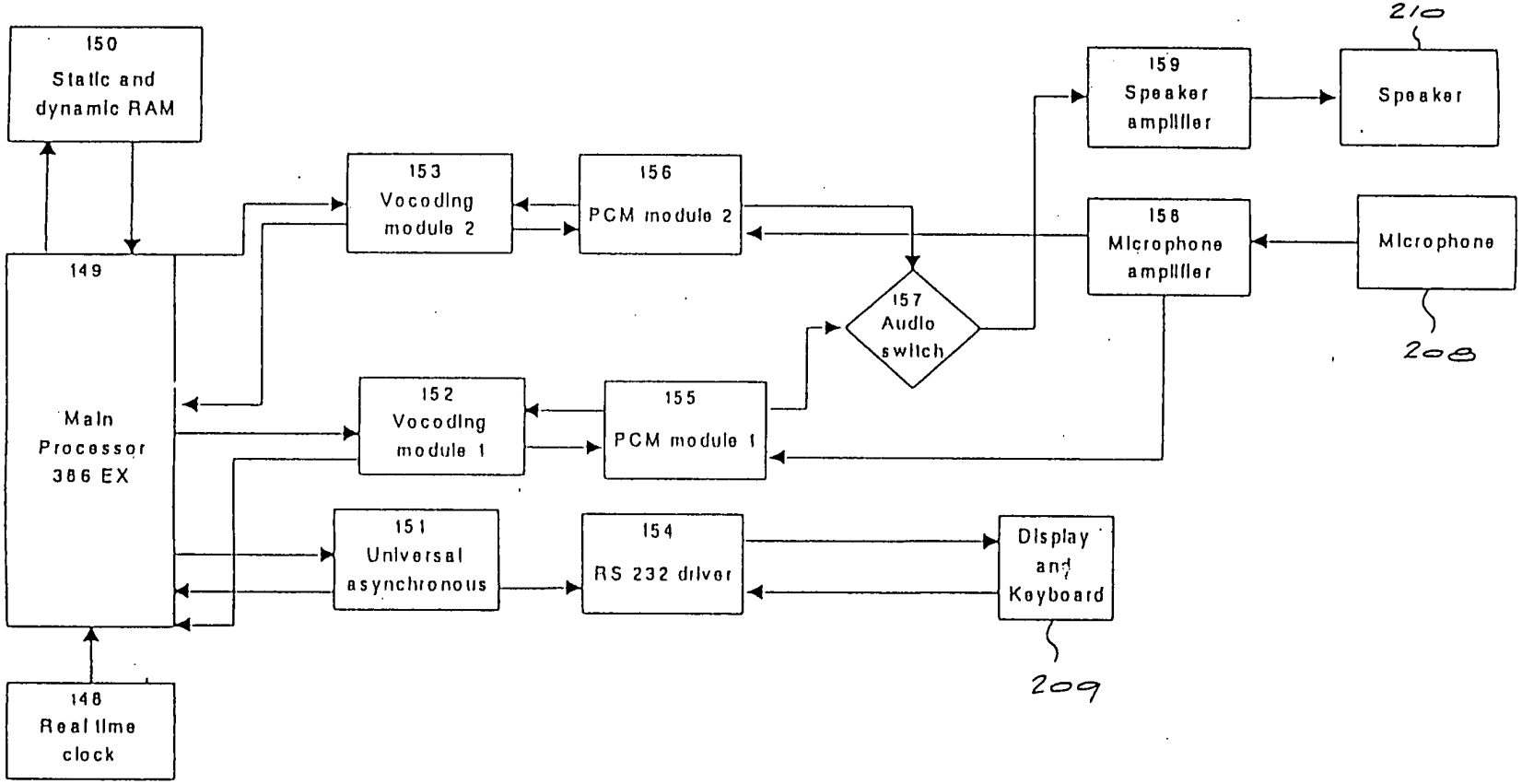

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Fig 12

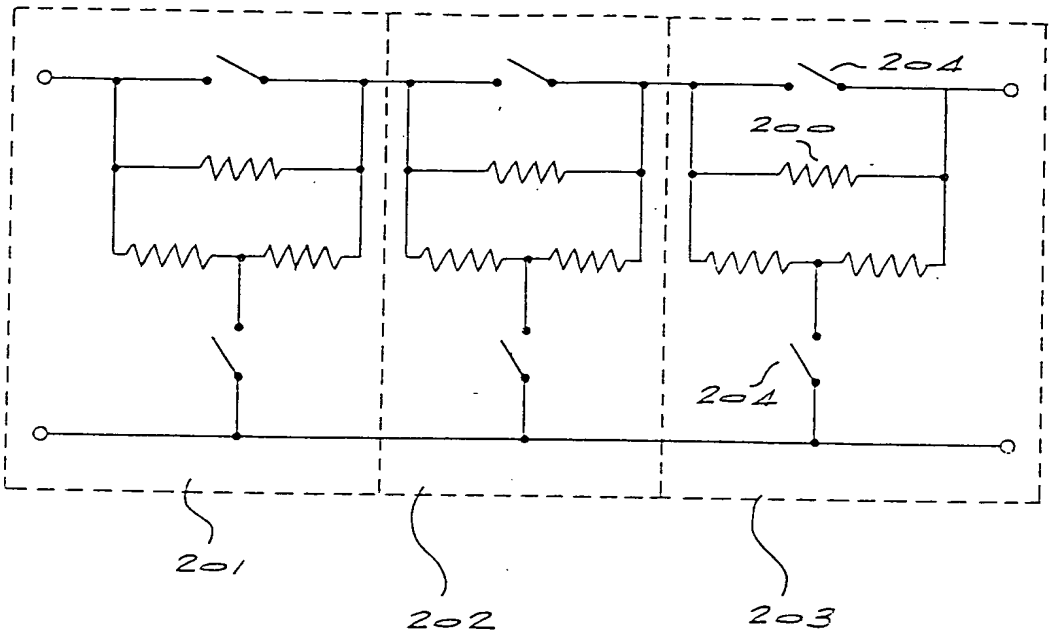
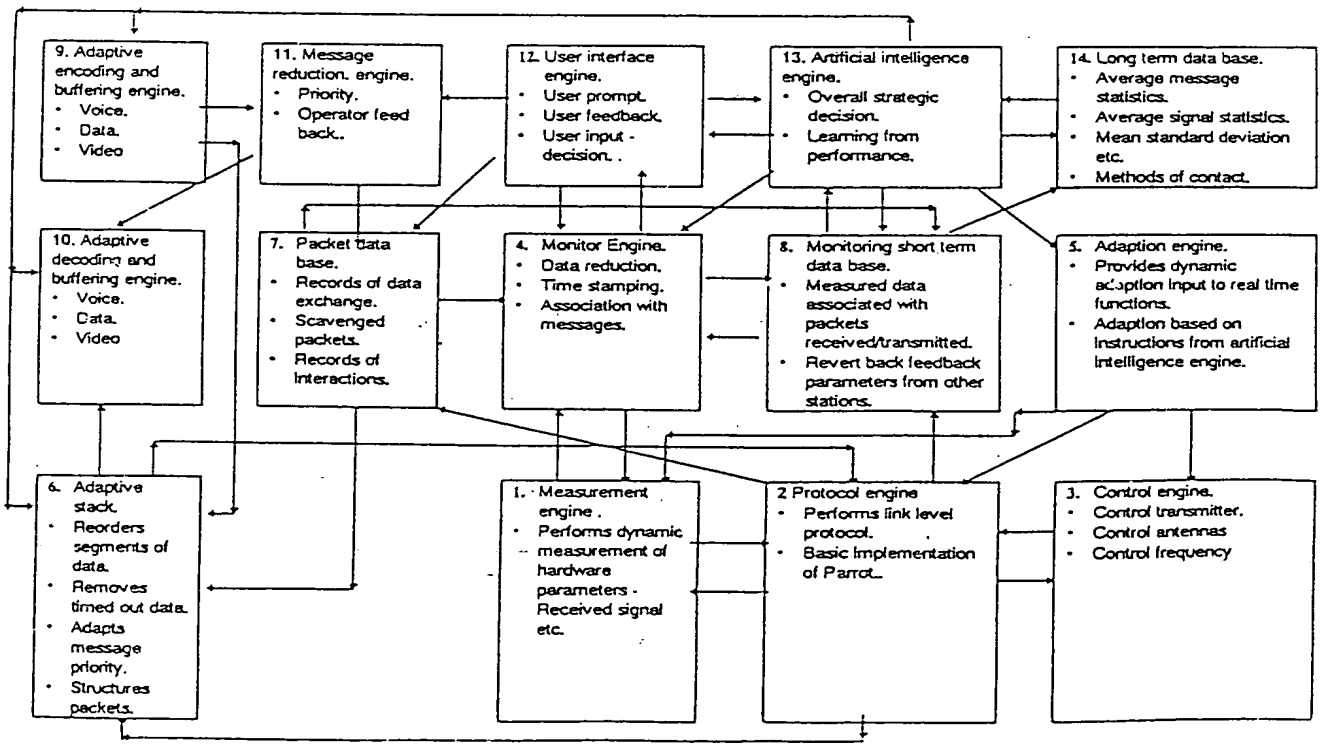
Fig 13